

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AKIRA INOUE

Appeal No. 1997-0016
Application No. 08/162,333¹

HEARD: October 20, 1999

Before THOMAS, RUGGIERO and HECKER, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 11, 13-16, and 18-22, all of the claims pending in the present application. Claims 1-10, 12, 17, and 23-25 have been canceled. An amendment after final rejection was filed October 26, 1995 and was entered by the Examiner.

¹ Application for patent filed December 7, 1993.

The claimed invention relates to the sharpening of an input image in which a high frequency component of an edge region portion of the input image is extracted and integrated to produce a sharpness value. More particularly, Appellant indicates at pages 8-17 of the specification that a high frequency emphasis coefficient is calculated from this sharpness value and is further manipulated and added to the input image to produce a sharpened signal.

Claim 11 is illustrative of the invention and reads as follows:

11. An apparatus for producing a sharpened image from an input image, comprising:

edge extraction means for receiving the input image and extracting a portion of the input image at which the brightness of the input image exhibits a great variation and outputting the extracted portion as an edge region;

high frequency filter means for receiving the edge region from the edge extraction means and extracting a high frequency component of the input image from the edge region;

integration means for receiving the extracted high frequency component and integrating the extracted high frequency component to output a sharpness value;

parameter calculation means for receiving the sharpness value from the integration means, calculating a high frequency emphasis coefficient from the sharpness value and outputting the high frequency emphasis coefficient as a sharpening parameter; and

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emphasis means for receiving the sharpening parameter from the parameter calculation means and sharpening the input image based on the sharpening parameter to produce the sharpened image, said emphasis means including multiplication means for multiplying an output of said high frequency filter means by the high frequency emphasis coefficient, and addition means for adding the input image to an output of said multiplication means.

The Examiner relies on the following prior art:

Yamada et al. (Yamada)	5,212,516	May 18, 1993
Takemoto et al. (Takemoto)	0,449,259	Oct. 02, 1991

(European)

The rejection of the appealed claims are set forth by the Examiner as follows:

1. Claims 11, 13-16, and 18-22 stand finally rejected under 35 U.S.C. § 112, first paragraph, as being based on an inadequate disclosure.

2. Claims 11, 13-16, and 18-22 stand finally rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the invention.

3. Claims 11, 13-16, and 18-22 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Takemoto in view of Yamada.

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Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Briefs² and Answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner, the arguments in support of the rejections and the evidence of obviousness relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellant's arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the disclosure in this application describes the claimed invention in a manner which complies with the requirements of

² The Appeal Brief was filed January 26, 1996. In response to the Examiner's Answer dated April 16, 1996, a Reply Brief was filed June 17, 1996 which was entered by the Examiner without further comment on July 9, 1996.

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35 U.S.C. § 112. We are also of the view that the claims particularly point out the invention in a manner which complies with 35 U.S.C. § 112, second paragraph. In addition, it is our opinion that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 11, 13-16, and 18-22. Accordingly, we reverse.

The rejection of claims 11, 13-16, and 18-22
under the first paragraph of 35 U.S.C. § 112.

We note that the Examiner, instead of relying on the written description" or "enablement" language of the statute, has used the terminology "lack of support" in the statement of the rejection. Our reviewing court has made it clear that written description and enablement are separate requirements under the first paragraph of 35 U.S.C. § 112. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1560, 19 USPQ 2d 1111, 1114 (Fed. Cir. 1991). The terminology "lack of support" has also been held to imply a reliance on the written description

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requirement of the statute. In re Higbee and Jasper, 527 F.2d 1405, 188 USPQ 488, 489 (CCPA 1976).

In view of the factual situation presented to us in this instance we will interpret the Examiner's basis for the 35 U.S.C. § 112, first paragraph, rejection as reliance on the "written description" portion of the statute. "The function of the description requirement [of the first paragraph of 35 U.S.C.

§ 112] is to ensure that the inventor has possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him." In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). "It is not necessary that the application describe the claim limitations exactly, . . . but only so clearly that persons of ordinary skill in the art will recognize from the disclosure that appellants invented processes including those limitations." Wertheim, 541 F.2d at 262, 191 USPQ at 96 citing In re Smythe, 480 F.2d 1376, 1382, 178 USPQ 279, 284 (CCPA 1973).

Furthermore, the Federal Circuit points out that "[i]t is not necessary that the claimed subject matter be described identically, but the disclosure originally filed must convey

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to those skilled in the art that applicant had invented the subject matter later claimed." In re Wilder, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984), cert. denied, 469 U.S. 1209 (1985), citing In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

In the present instance, we note that the relevant language of independent claim 11 recites:

... high frequency filter means for
receiving the edge region from the edge
extraction means and extracting a high
frequency component of the input image
from the edge region;...

We agree with the Examiner (Answer, page 10) that none of Appellant's drawing figures unambiguously illustrate that the high frequency filter receives an input from the edge extraction means as claimed. Notwithstanding this fact, our review of Appellant's entire disclosure reveals that the description at pages 20 and 21 of the specification clearly indicates that high frequency components are extracted from edge point regions as a result of the application of edge region signals to a high frequency filter. In our view, Appellant is correct in the assertion that the originally filed specification provides written description support for

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the invention as claimed and, accordingly, we do not sustain the Examiner's rejection of claims 11, 13-16, and 18-22 under the first paragraph of 35 U.S.C. § 112.

The rejection of claims 11, 13-16, and 18-22 as being indefinite under the second paragraph of 35 U.S.C. § 112.

The Examiner's basis for this rejection apparently stems from the same alleged deficiency that gave root to the 35 U.S.C. § 112, first paragraph, rejection discussed above. In the Examiner's view, the lack of support for claim language which sets forth the receipt of edge region signals by a high frequency filter raises a question as to the clarity of the claims.

The general rule is that a claim must set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the disclosure as it would be by the artisan. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the

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specification. Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984).

After reviewing the arguments of record, we are in agreement with Appellant (Answer, page 6) that no ambiguity or lack of clarity exists in the claim language, i.e., the receipt of edge region signals by the high frequency filter is set forth with the required specificity. It is our view that the skilled artisan, having considered the specification in its entirety, would have no difficulty ascertaining the scope of the invention recited in claims 11, 13-16, and 18-22. Therefore, the rejection of claims 11, 13-16, and 18-22 under the second paragraph of 35 U.S.C. § 112 is not sustained.

The obviousness rejection of claims 11, 13-16 and 18-22 as being unpatentable over Takemoto in view of Yamada.

As the basis for the obviousness rejection, the Examiner proposes to modify the image sharpening system of Takemoto by relying on Yamada to supply the missing teaching of an integration means for integrating the extracted high frequency

components of the edge region of the input image. In the Examiner's view, the skilled artisan would find it obvious to integrate the high frequency components of Takemoto for normalization purposes in view of the image sharpening teachings of Yamada.

In response, Appellant asserts (Brief, page 11) a lack of motivation for modifying the prior art in the manner suggested by the Examiner. We agree. As discussed previously, the Examiner relies on Yamada for teaching the integration of extracted high frequency components of an image signal to sharpen the image of such signal. Despite the Examiner's assertions (Answer, page 6) to the contrary, however, Takemoto's edge detecting and filtering feature makes no mention of the extraction of high frequency components. This reason alone makes the Examiner's suggested motivation for adding the integrator of Yamada to Takemoto problematical at best.

Further, aside from the general assertion that it would be obvious to add an integrator to Takemoto, the Examiner has not indicated how and where such integrator would be coupled to the prior art circuitry of Takemoto to achieve the claimed

invention. We are in agreement with Appellant that even assuming arguendo that the skilled artisan would be motivated to provide for integration of the edge extracted signals in Takemoto, the proposed combination would not result in the invention as claimed. The language of Appellant's claim 11 requires that the integrated output sharpness value from the edge extracting circuitry be supplied to the parameter calculating means from which a sharpening parameter is calculated and outputted. In this regard, as illustrated in Figure 1 of Takemoto, the output of the edge extracting block S4 is not applied to the sharpness calculating block identified as S6 by the Examiner. Therefore, even if an integrator were connected to the output of the edge extractor (block S4) in Takemoto, the resulting combination would not meet the limitations of the claims.

Since, for the above reasons, it is our view that the Examiner has not established a prima facie case of obviousness, we do not sustain the 35 U.S.C. § 103 rejection of independent claim 11 nor of claims 13-16 and 18-22 dependent thereon.

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In summary, we have not sustained any of the Examiner's rejection of the claims on appeal. Therefore, the Examiner's decision rejecting claims 11, 13-16, and 18-22 is reversed.

REVERSED

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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STUART N. HECKER)	
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